

Subject Index to Volume 21

A

- Acetylcholine
 - cholinergic response, regional colonic differences
 - electrical activity and, gastric cells (toad), G12
 - potassium currents and, esophageal smooth muscle cells, G794
 - stimulation, submandibular acinar cell volume and, G878
- ACh: *see* Acetylcholine
- Acid, secretion, signal transduction, EGF effects, parietal cells, G476
- Acid-base balance, biliary bicarbonate secretion and, liver (guinea pig), G863
- Acidosis
 - biliary bicarbonate secretion and, liver (guinea pig), G863
 - potassium balance effects, flow in liver, G45
- Acinar cells, submandibular, decrease in volume, ACh stimulation and, G878
- Actinomycin D, intestinal catabolism, G557
- Adenosine, increase, food-induced jejunal hyperemia and, G370
- Adenosine monophosphate, cyclic dibutyl, galanin release, gastric G-cells, G596
 - peptide YY and neuropeptide Y and, intestinal villus-crypt axis, G753
- Adenosine triphosphatase, calcium-dependent, duodenal transmembrane (bird), G16
- Adenosine triphosphate
 - oxidized glutathione efflux, hepatocytes, G699
 - VIP receptors, selective protection of, G103
- Albumin, content, comparative analysis, mesenteric, G714
- Aldosterone, receptor-specific agonists, ion transport and, proximal colon, G492
- Alkalosis, biliary bicarbonate secretion and, liver (guinea pig), G863
- α -Amanitin, intestinal catabolism, G557
- Amino acids, transport, ontogenetic development, intestine (bullfrog), G760, G770
- Amino-nitrogen, nitric oxide administration effects, splanchnic artery occlusion shock, G275
- Aminopeptidase, enkephalin metabolism and, stomach wall, G143
- Amylase, release, CCK agonist and, G648
- Amyogenesis, small intestinal, opioid-induced, G282
- Anal sphincter, internal, neuropeptide Y role in (opossum), G59
- Angiotensin-converting enzyme
 - enkephalin metabolism and, stomach wall, G143
 - inhibitor, transfer, liver cell membranes, G461
- Anions
 - exchange
 - electroneutral sodium chloride absorption, distal colon, G261
 - zinc effects, gallbladder epithelium (mudpuppy), G745

- Anti-insulin serum, exocrine pancreatic secretion and, G268
- AR42J cells, sodium-hydrogen exchanger in, gastrointestinal peptides, G958
- Asialoglycoprotein, trafficking, developing liver, G129
- Asparagine, ornithine decarboxylase activity, LoVo cells, G934

B

- Basolateral membrane
 - calcium uptake, duodenum (bird), G16
 - potassium conductance, histamine effects, stomach (frog), G631
- Benzalkonium chloride, myenteric neurons, small intestine, myoelectric activity, G519
- Bethanechol, gastric secretion and, antral vagotomy effects, G919
- Bicarbonate
 - biliary secretion, acid-base balance effects, liver (guinea pig), G863
 - gastric, intrahypothalamic corticotropin-releasing factor effects, G152
 - requirements, base secretion in distal colon, G825
- Bile duct, propulsive behavior, sphincter of Oddi (opossum), G138
- Bile flow, acid-base balance effects, liver (guinea pig), G863
- Biliary excretion
 - circadian rhythms of, G653
 - epidermal growth factor, receptor occupancy and, liver, G682
- Blood flow: *see also* Circulation; Microcirculation
 - gastric, histamine effects, G440
 - gastric mucosal, response to PAF, morphine and capsaicin effects, G352
 - hepatic, oxygen supply demand and hypothermia (pig), G910
 - jejunal, food-induced jejunal hyperemia and, G370
 - liver, ethanol effects and oxygen metabolism, G411
 - measurements, radioactive microsphere technique, G365
- Blood pressure: *see also* Pressure
 - gastric motility, vagally mediated stimulation of, G637
 - mean arterial, splanchnic artery occlusion shock, nitric oxide effects, G275
- Bolus
 - swallowing coordination, manometry, G173
 - variables, oral and pharyngeal phases of swallowing and, G657
- Bombesin
 - binding, AR42J cells, pancreas, G803
 - decreased secretion, calcium ion influx defect in peptic cells (frog), G542
 - excitability and, brain stem neurons, G841
 - gastric secretion and, antral vagotomy effects, G919
 - receptors: *see* Receptors
 - regulation, pancreatic duct epithelial growth, G833
 - secretion, pancreas, carbachol effects (guinea pig), G107

Brain

- glucose utilization, cold water restraint, neurotensin effects, G591
- gut axis, isobaric intestinal distension, G202
- intrahypothalamic corticotropin-releasing factor, stress ulcers and, G152
- Brain stem
 - neurons, bombesin effects, gastric distension, G841
 - vagal interactions, proximal stomach, G320
- Brush-border membrane vesicles
 - electroneutral sodium chloride absorption, distal colon, G261
 - intestinal, iron uptake from transferrin and lactoferrin, G535
- Brush-border vesicles, calcium uptake, duodenum (bird), G16
- Bumetanide, sodium-potassium-chloride cotransport sensitive to, regulatory volume increase and, jejunum (guinea pig), G665

C

- Cadaverine, gastrointestinal, cellular accumulation and enterohepatic circulation, G576
- Caerulein, regulation, pancreatic duct epithelial growth, G833
- Calcitonin gene-related peptide, pro-somatostatin-derived peptide release, gastric fundus, G316
- Calcium
 - intracellular, mobilization, CCK agonist and, G648
 - smooth muscle contractility and, gastric antrum, newborn, G571
 - uptake, transmembrane, vitamin D-dependent duodenal (bird), G16
- Calcium ions
 - influx, decreased secretion, peptic cells (frog), G542
 - release, hormonal stimulation, liver, G73
- cAMP: *see* Adenosine monophosphate, cyclic
- Capsaicin
 - excitability and, brain stem neurons, G841
 - influences, gastric microcirculatory response to PAF, G352
 - role in gastric emptying, G552
- Carbachol
 - EGF effects, signal transduction, parietal cells, G476
 - pancreatic enzyme secretion and, down-regulation of receptors (guinea pig), G107
 - regulation, pancreatic duct epithelial growth, G833
- Carbamylcholine, galanin inhibition and, gastric release, gastric G-cells, G596
- Carbohydrates
 - dietary, transport, intestine (bullfrog), G760, G770
 - ileal perfusion, pancreatic secretion and intestinal motility, G196
- Carbon dioxide
 - hydrogen-potassium-ATPase activity and, gastric glands, G719

- Carbon dioxide (*continued*)
 requirements, base secretion in distal colon, G825
- Carbonyl cyanide *p*-trifluoromethoxyphenylhydrazine, calcium ion release, liver, G73
- Carboxypeptidase, enkephalin metabolism and, stomach wall, G143
- Cardiac output
 radioactive microsphere technique, G365
 vascular sensitivity to norepinephrine, portal hypertension, G191
- Casein, degradation by milk, intestinal, G426
- Catalase, ischemia/reperfusion-induced granulocyte infiltration and, G185
- Cathepsin D, nitric oxide administration effects, splanchnic artery occlusion shock, G275
- Cations, divalent, zinc effects, gallbladder epithelium (mudpuppy), G745
- CKK: *see* Cholecystokinin
- Cecum, proximal, epithelial cells, glycylsarcosine transport from (chicken), G660
- Central nervous system, intrahypothalamic corticotropin-releasing factor, stress ulcers and, G152
- Chloride
 requirements, base secretion in distal colon, G825
 secretion
 cyclical, H₂ receptor effects, distal colon (guinea pig), G887
 histamine effects, distal colon, G432
 tetrodotoxin effects, distal colon, G223
 transport, zinc effects, gallbladder epithelium (mudpuppy), G745
- Cholecystokinin
 characterization, intestine, G253
 downregulation, VIP and secretin, pancreatic acini, G395
 duodenal, somatostatin regulation of, G358
 molecular variants of, after endogenous stimulation, G951
 pancreatic receptors for, G86
 role in gastric emptying, G552
 secretion
 pancreas, carbachol effects (guinea pig), G107
 regulation by hormones, food, and neural pathways, G512
 sodium-hydrogen exchanger, AR42J cells, G958
- Cholecystokinin octapeptide, endogenous insulin effects, G268
- Cholera toxin, interaction, cloned goblet cells in monolayer culture, G96
- Cholestasis, reactive oxygen generation, glutathione disulfide as index of, liver, G499
- Cholinergic nerves, tetrodotoxin effects, chloride secretion, distal colon, G223
- Chromatography
 high-performance liquid, CKK after endogenous stimulation, G951
 high-pressure liquid
 CKK-58, intestine, G253
 pepstatin, gastric lumen, G419
 somatostatin release, calcitonin gene-related peptides, intestine, G316
- Chromium, metallothionein induction, liver, G926
- Circadian rhythm: *see* Rhythm
- Circulation: *see also* Blood flow; Microcirculation
 enterohepatic, cellular accumulation and, luminal polyamines, G576
- Cobalt, destruction, intestinal nerves, G848
- Colchicine
 ferritin clearance and, G707
 trafficking, developing liver, G129
- Cold, stress effects, fecal pellet output and colonic transit with, G329
- Colitis, healing, orally active inhibitor of leukotriene synthesis, model, G527
- Collagen, mechanics, esophageal smooth muscle, G338
- Colon
 ascending, transit of solids through, G856
 cancer cells, ornithine decarboxylase activity, G934
 descending, hypertonic fluid absorption, G377
 distal
 base secretion in, G825
 chloride secretion, tetrodotoxin effects, G223
 cyclical chloride secretion, H₂ receptor effects (guinea pig), G887
 electroneutral sodium chloride absorption, G261
 epithelial cells, ouabain-sensitive potassium-ATPase in (guinea pig), G506
 histamine augmentation of secretion, G432
 distension, ileocecal sphincter contraction to, G585
 electrolyte transport, postnatal development of, G447
 myenteric plexus, distal and proximal differences, G404
 myoelectric and motor activity, morphine effects (monkey), G247
 proximal
 interactions between muscle layers, G484
 pathways of slow-wave propagation, G894
 prostaglandins and indomethacin effects, G231
 steroid regulation of ion transport, G492
 smooth muscle, interactions between muscle layers, G484
 transit, cold-restraint stress effects, G329
- Colonic mucosa, hypertonic fluid absorption, G377
- Computer analysis, swallowing coordination, manometry, G173
- Constipation, opioid-induced, small intestine, G282
- Copper, chelation, inhibition of gastrin amidation and, G810
- Corticosterone, ornithine decarboxylase and damage after, gastric and duodenal mucosal, G942
- Corticotropin-releasing factor, intrahypothalamic, gastric bicarbonate and stress ulcers with, G152
- Coupling, electrical, small intestine, G738
- Crypt cells, ornithine decarboxylase, putrescine regulation, intestine, G308
- Crypt glands, tetrodotoxin effects, chloride secretion, distal colon, G223
- Cystathionase, glutathione efflux and, hepatocytes, G967
- Cytochalasin B, decreased secretion, calcium ion influx defect in peptic cells (frog), G542
- Cytochrome c, ethanol-induced damage, gastric G-cells, G603
- D**
- Defecation, colonic transit and, cold-restraint stress effects, G329
- Deferoxamine, ischemia/reperfusion-induced granulocyte infiltration and, G185
- Dehydration, fecal, mechanical aspects, G391
- 2-Deoxy-D-glucose, gastric secretion, antral vagotomy effects, G919
- Deoxyribonucleic acid
 corticosterone effects and, ornithine decarboxylase, gastric and duodenal mucosal, G942
 repair, gastric mucosal stress ulcers, G78
- Deuterium oxide, absorption, intestinal, G216
- Development: *see also* Growth
 postnatal, electrolyte transport, colonic, G447
 smooth muscle contractility, gastric antrum, newborn, G571
- Diabetes mellitus, muscle structure and function, small intestine, G690
- Diaphragm, pressure increase, lower esophageal sphincter pressure response, G624
- Dicarboxylic acid metabolite, transfer, liver cell membranes, G461
- Diethyldithiocarbamate, gastrin amidation and, G810
- Dimaprit, H₂ receptors and chloride secretion, distal colon (guinea pig), G887
- Dimethyl sulfoxide, ischemia/reperfusion-induced granulocyte infiltration and, G185
- Dipeptides, accumulation, epithelial cells, cecum and rectum (chicken), G660
- Downregulation
 CKK, VIP and secretin, pancreatic acini, G395
 EGF internalization rate, liver, G682
- Duodenojejenum, migrating motor complex, synchrony, G171
- Duodenum
 calcium uptake, brush-border and basolateral membrane vesicles (bird), G16
 CKK, somatostatin regulation of, G358
 motor inhibition, neural control of, antral contractions, G24
- Dysmyogenesis, small intestinal, opioid-induced, G282
- E**
- EGF: *see* Epidermal growth factor
- Eicosanoids, inflammation and, gastric ulcer, G1
- Eicosapentaenoic acid, inflammation and, gastric ulcer, G1
- Electrical field, stimulation, regional colonic differences
- Electrolytes
 absorption, intestinal, G216
 transport, colonic, postnatal development of, G447
- Electromyography, diaphragm, lower esophageal sphincter pressure response, G624

Enalaprilat, transfer, liver cell membranes, G461

Endocytosis
asialoglycoproteins and, developing liver, G129
receptor-mediated, internalization of epidermal growth factor, G682

Endogenous stimulation, molecular variants of CCK after, G951

Endopeptidase-24.11, enkephalin metabolism and, stomach wall, G143

Endotoxin, metallothionein induction, hepatic, inflammation and, G926

Enkephalin, metabolism, stomach wall, G143

Enteric nervous system
esophageal clearance (opossum), G164
myoelectric activity, after chemical ablation of neurons, small intestine, G519
VIP receptors, selective protection of, G103

Enderocytes
glycylsarcosine transport, proximal cecum and rectum (chicken), G660
villus, regulatory volume increases in, sodium-potassium-chloride cotransport and (guinea pig), G665

Enzymes: *see also* specific enzyme
hepatic, oxygen supply demand and hypothermia (pig), G910

Epidermal growth factor
internalization of, receptor occupancy effects, liver, G682
regulation, pancreatic duct epithelial growth, G833
signal transduction and, parietal cells, G476

Epithelial cells, intestinal, ornithine decarboxylase regulation, G454

Esophageal sphincter
pressure: *see* Pressure
upper, swallow coordination, manometry, G173

Esophagus
contractions, modulation of, bolus volume and outflow obstruction, G208
isolated, clearance (opossum), G164
muscle strips, transmural field stimulation effects, G344
smooth muscle, mechanical properties, G338
smooth muscle cells, cholinergic regulation of potassium current, G794

Ethanol
damage induced by, gastric G-cells, oxygen radicals in, G603
oxygen ethanol and lactate metabolism and, liver, G411

F

Fat
ileal nutrient perfusion, pancreatic secretion and intestinal motility, G196
triolein absorption, diet effects, weanlings, G38

Feces
dehydration, mechanical aspects, G391
pellet output, cold-restraint stress effects, G329

Feeding
diet, triolein absorption and, weanlings, G38
dietary sodium depletion, steroid regulation, proximal colon, G492
hyperemia induced by, adenosine and, jejunum, G370

meals, pancreatic secretion induced by, L364,718 effects, G179
regulation, CCK secretion, G512
sham, antral vagotomy effects, gastric secretion, G919

Ferritin, clearance, colchicine effects, G707

Fetus, somatostatin synthesis, intestinal cells, G974

Fluid
hypertonic, absorption, descending colon, G377
peritoneal, protein content, mesenteric, G714

Forskolin
decreased secretion, calcium ion influx defect in peptic cells (frog), G542
VIP receptors, selective protection of, G103

Fundectomy, gastrin and somatostatin gene expression and, antral, G788

G

Galanin, gastrin release and, gastric G-cells, G596

Gallbladder, epithelium, zinc effects on anion exchange (mudpuppy), G745

Gastric acid
exocrine secretion and processing, gastric lumen, G419
secretion
 α -amidation of gastrin and, G810
antral vagotomy effects, G919
stress ulcers and, intrahypothalamic corticotropin-releasing factor effects, G152

Gastric antrum
cholinergic myenteric neurons, neurokinin inhibition in, G122
contractions, neural control of duodenal motor inhibition, G24
gastrin and somatostatin gene expression, inhibition of gastric secretion effects, G788
smooth muscle contractility, newborn, G571
vagotomy, gastrin and gastric secretion with, G919

Gastric cells, electrical activity, acetylcholine and substance P effects (toad), G12

Gastric distension, brain stem neurons sensitive to, bombesin effects, G841

Gastric emptying
afferent neurons and CCK role in, G552
nondigestible solids, hydrodynamic correlation, G65

Gastric glands
contraction, CCK agonist and, G648
glucose oxidation, hydrogen-potassium-ATPase coupling with, G719

Gastric lumen, pro-xenopsin secretion, exocrine, G419

Gastric mucosa
cell culture system, mucous cell synthetic functions in, G774
cells: *see* G-cells
oxyntic and surface epithelial cells, basolateral potassium conductance, histamine effects (frog), G631

Gastric secretion, inhibition of, antral gastrin and somatostatin gene expression and, G788

Gastric tone, isobaric intestinal distension, G202

Gastrin
 α -amidation of, gastric acid secretion and, G810

gastric secretion and, antral vagotomy effects, G919

gene expression, antral, inhibition of gastric secretion effects, G788

processing, posttranslational, G904

release, galanin inhibition of, gastric G-cells, G596

sodium-hydrogen exchanger, AR42J cells, G958

Gastrin precursor, posttranslational processing, modulation of, G904

Gastrin-releasing peptide, bombesin receptors, pancreatic acinar AR42J cells, G803

Gastrointestinal hormones
characterization of, intestine, G253
duodenal, somatostatin regulation of, G358
molecular variants of, after endogenous stimulation, G951

G-cells
gastric
ethanol-induced damage, oxygen radicals in, G603
galanin inhibition of gastrin release, G596

Glucagon, calcium ion release, liver, G73

Glucocorticoids
induction, sucrase-isomaltase mRNA, G52
ornithine decarboxylase and damage after, gastric and duodenal mucosal, G942
receptor-specific agonists, ion transport and, proximal colon, G492

Glucose
absorption, intestinal, G216
oxidation, hydrogen-potassium-ATPase coupling with, gastric glands, G719
transport, ontogenetic development, intestine (bullfrog), G760, G770
utilization, cerebral, cold water restraint, neurotensin effects, G591

Glutathione
efflux, methionine inhibition of, liver, G967
oxidized, ATP-dependent efflux, hepatocytes, G699

Glutathione disulfide, oxidant stress and, during hypoxia, liver, G499

Glycoprotein, mucin, gastric mucous cell culture system, G774

Glycylsarcosine, transport, epithelial cells, proximal cecum and rectum (chicken), G660

Goblet cells, cloned, monolayer culture, cholera toxin interaction, G96

Granulocytes, infiltration, ischemia/reperfusion-induced, oxidants in, G185

Growth: *see also* Development
ornithine decarboxylase, putrescine regulation, intestine, G308
regulation, pancreatic duct epithelium, G833
smooth muscle, diabetes effects, G690

Guanosine monophosphate, cyclic, receptors for secretin and VIP, pancreatic acini, G395

Gut: *see* Intestine

H

Hepatocytes
osmotic stress effects, cell volume regulation, G290, G299
oxidized glutathione efflux, ATP-dependent, G699

Histamine

- basolateral potassium conductance and, oxyntic and epithelial cells, stomach (frog), G631
- colonic secretion and, distal colon, G432
- cyclical chloride secretion and, distal colon (guinea pig), G887
- EGF effects, signal transduction, parietal cells, G476
- gastric secretion and, antral vagotomy effects, G919
- receptors: *see* Receptors
- vascular resistance and, gastric, G440
- Hormonal regulation, CCK secretion, G512
- Hormonal stimulation, calcium ion release, liver, G73
- Hydrogen, secretion, epithelial cells, distal colon (guinea pig), G506
- Hydrogen gas, clearance, morphine and capsaicin effects, stomach, G352
- Hydrogen-potassium-ATPase activity, coupling with glucose oxidation, gastric glands, G719
- ouabain-sensitive, epithelial cells, distal colon (guinea pig), G506
- Hydrogen-potassium exchange, ouabain-sensitive, epithelial cells, distal colon (guinea pig), G506
- Hyperbilirubinemia, hereditary, glutathione conjugate secretion, hepatocytes, G699
- Hyperemia, jejunal, food-induced, adenosine and, G370
- Hypergastrinemia, gastric precursor, post-translational processing, G904
- Hyperglucagonism, sensitivity to norepinephrine and, portal hypertension, G191
- Hyperosmolar solutions, role in gastric emptying, G552
- Hypertension, portal, systemic vascular sensitivity to norepinephrine, G191
- Hypothermia, oxygen supply-demand and, ischemia-reperfusion injury, liver (pig), G910
- Hypoxia, glutathione disulfide as index, liver, G499

I

- Ileocecal sphincter, contraction, colonic distension and, G585
- Ileum
 - contraction, CCK agonist and, G648
 - nutrient perfusion, pancreatic secretion and intestinal motility, G196
 - terminal, prostaglandins and indomethacin effects, G231
- Impedance, electrical, ACh, submandibular acinar cell volume and, G878
- Indicator-dilution technique, enalaprilat transfer, liver cell membranes, G461
- Indomethacin, prostaglandin $F_{2\alpha}$, small and large intestinal motility, G231
- Inflammatory bowel disease, healing, orally active inhibitor of leukotriene synthesis, model, G527
- Insulin, endogenous, exocrine pancreatic secretion and, G268
- Interdigestive state, frequency and velocity, intestinal contractions, G738
- Intestinal cells, somatostatin synthesis, fetus, G974
- Intestinal nerves, chemical degeneration of, G848

Intestine

- afferent innervation, calcitonin gene-related peptides and, G316
- brush-border membrane vesicles, iron uptake from transferrin and lactoferrin, G535
- calcium absorption, duodenal transmembrane (bird), G16
- catabolism, 1,25-dihydroxyvitamin D_3 , G557
- CCK in, G253
- chemical degeneration, nerves, G848
- degradation of somatostatin, milk, G426
- electroneutral sodium chloride absorption, G261
- epithelial cells, ornithine decarboxylase regulation, G454
- isobaric distension, sensorial relay and reflex gastric relaxation, G202
- migrating motor complex, synchrony with rectal, G171
- nutrient transporters, ontogenetic development of (bullfrog), G760, G770
- ornithine decarboxylase, putrescine regulation of, G308
- somatostatin synthesis, fetus, G974
- transit, cold-restraint stress effects, G329
- unstirred water layers, villous motility and, G238
- water absorption, G216
- Intestine, small
 - chemical ablation of myenteric neurons, myoelectric activity after, G519
 - contraction frequency, propagation velocities and, G738
 - diabetic, muscle structure and function, G690
 - epithelium, peptide YY-neuropeptide Y receptor distribution, G753
 - recording ambulant motility, small bowel, G610
- Intraluminal strain gauges, recording ambulant motility, small bowel, G610
- Ionophore A71378, CCK agonist, G648
- Ions
 - absorption, descending colon, G377
 - requirements, base secretion in distal colon, G825
 - transport, steroid regulation of, proximal colon, G492

Iron

- metallothionein induction, liver, G926
- uptake, transferrin and lactoferrin, intestinal brush-border membrane vesicles, G535

Ischemia

- circulating xanthine oxidase mediation of, G564
- microvascular, PAF and, adherent leukocytes, G158
- splanchnic, nitric oxide and, G275

Isoproterenol

- decreased secretion, calcium ion influx defect in peptic cells (frog), G542
- VIP receptors, selective protection of, G103

J

Jejunum

- epithelial cells, glycylsarcosine transport from (chicken), G660
- hyperemia, food-induced, adenosine and, G370
- regulation, gastric motility patterns, G32

- sucrase isomaltase mRNA, development and distribution in tissues, G52
- villus, regulatory volume increases in, sodium-potassium-chloride cotransport and (guinea pig), G665
- Junction, gap, hypertonic fluid absorption, descending colon, G377

L

- L364,718, meal-induced pancreatic secretion and, G179
- Lactoferrin, iron uptake from, intestinal brush-border membrane vesicles, G535
- Length-tension relations, esophageal smooth muscle, G338
- Leukocytes, adherent, microvascular dysfunction induced by PAF, G158
- Leukotrienes
 - inflammation and, gastric ulcer, G1
 - synthesis, orally active inhibitor of, healing of colitis and, model, G527
- Lipids
 - absorption, villous motility and, intestine, G238
 - excretion, circadian rhythms of, G653
 - mediators of inflammation, gastric ulcer, G1
 - surfactant, gastric mucous cell culture system, G774
- Lipoxygenase, leukotriene synthesis and, healing of colitis, model, G527
- Liver
 - biliary bicarbonate secretion, acid-base balance effects (guinea pig), G863
 - calcium ion release, hormonal stimulation of, G73
 - canalicular membrane, bile acid transport protein of, G728
 - cells: *see* Hepatocytes
 - cell membranes, enalaprilat transfer across, G461
 - developing, asialoglycoprotein trafficking in, microtubule role, G129
 - flow, potassium balance effects, G45
 - glutathione conjugate secretion, ATP-dependent, G699
 - ischemic injury, circulating xanthine oxidase mediation of, G564
 - metallothionein, induction by intraperitoneal metal injection (chick), G926
 - oxidant stress during hypoxia, glutathione disulfide as index of, G499
 - oxygen ethanol and lactate metabolism, acute and chronic ethanol effects, G411
 - oxygen supply-demand, hypothermia and (pig), G910
- LoVo cells, ornithine decarboxylase activity, G934
- Lysosome, excretion, circadian rhythms of, G653

M

Manometry

- patterns of motility, antral and pyloric, G616
- pharyngeal, upper esophageal and, G173
- recording ambulant motility, small bowel, G610
- Mast cells, gastric mucosa, synthetic functions, G774
- Meals: *see* Feeding
- Medullary raphe, vagally mediated stimulation, gastric motility, G637

- Membrane**
 apical, zinc effects on anion exchange, gallbladder (mudpuppy), G745
 basolateral: *see* Basolateral membrane
 canalicular, bile acid transport protein, liver, G728
Mesenteric tissue, protein content, comparative analysis, G714
Metal, intraperitoneal injection, induction of metallothionein, liver (chick), G926
Metallothionein, induction, intraperitoneal metal injection, liver (chick), G926
Methionine, inhibition, glutathione efflux, liver, G967
1,4-Methylhistamine, vascular resistance and, gastric, G440
Microcirculation: *see also* Blood flow; Circulation
 gastric, response to PAF, morphine and capsaicin effects, G352
Microdialysis, enkephalin metabolism and, stomach wall, G143
Microscopy, electron, chemical degeneration, intestinal nerves, G848
Microspheres, radiolabeled, splanchnic and systemic hemodynamics, G365
Milk, degradation of somatostatin and, intestinal, G426
Models
 healing of colitis, orally active inhibitor of leukotriene synthesis, G527
 hepatic uptake, parallel tube of, G411
Monooxygenase, inhibition of gastrin amidation and, G810
Morphine
 influences, gastric microcirculatory response to PAF, G352
 myoelectric and motor activity, colonic (monkey), G247
Motility
 antral, evaluation of patterns, motion detector, G616
 colonic, morphine effects (monkey), G247
 gastric
 acetylcholine and substance P effects (toad), G12
 patterns, jejunal regulation of, G32
 vagally mediated stimulation, medullary raphe and, G637
 gastrointestinal, interactions between muscle layers, G484
 intestinal
 pancreatic secretion and, G196
 propagation velocities and frequencies of contractions, G738
 prostaglandins and indomethacin effects, G231
 obstructed esophagus, G208
 pyloric, evaluation of patterns, motion detector, G616
 small bowel
 intraluminal strain gauges for, G610
 opioids and, G282
 villous, unstirred water layers and, intestine, G238
Motion detector, motility patterns, antral and pyloric, G616
Motor complex
 migrating
 intestinal and rectal synchrony, G171
 jejunal regulation of gastric motility and, G32
mRNA: *see* Ribonucleic acid, messenger
- Mucus**, secretion, cholera toxin interaction with cloned goblet cells, G96
Muscle
 isolated strips, esophageal, transmural field stimulation effects, G344
 layers, electrical and mechanical interactions, proximal colon, G484
 longitudinal vs. circular, colonic myenteric plexus, G404
 structure and function characteristics, diabetic small intestine, G690
Muscle, smooth
 electrophysiology, acetylcholine and substance P effects (toad), G12
 esophageal, mechanical properties, G338
 gastric antrum, contractility, newborn, G571
 internal anal sphincter, neuropeptide Y role in (opossum), G59
 intestinal
 diabetes effects, G690
 myoelectric activity, G519
 proximal colon, pathways of slow-wave propagation, G894
Muscle cells, smooth, esophageal, cholinergic regulation of potassium current, G794
Muscularis propria, proximal colon, pathways of slow-wave propagation, G894
Myeloperoxidase, ischemia/reperfusion-induced granulocyte infiltration and, G185
Myocardial depressant factor, nitric oxide administration effects, splanchnic artery occlusion shock, G275
Myoelectric activity
 after chemical ablation of myenteric neurons, small intestine, G519
 colonic, morphine effects (monkey), G247
 intestinal, prostaglandins and indomethacin effects, G231
- N**
- Neural control**, duodenal motor inhibition, antral contractions, G24
Neural pathways, CCK secretion, G512
Neurokinin, inhibition, cholinergic myenteric neurons in antrum, G122
Neuromedin C, galanin inhibition and, gastric release, gastric G-cells, G596
Neurons
 afferent
 role in gastric emptying, G552
 sensory, response to PAF, morphine and capsaicin effects, G352
 brain stem
 bombesin effects, gastric distension, G841
 gastric vagal interactions, G320
 cholinergic myenteric, antral, neurokinin inhibition in, G122
Neuropeptides, pretreatment, gastric microcirculatory response to PAF and, G352
Neuropeptide Y
 internal anal sphincter (opossum), G59
 peptide YY and, distribution, intestinal villus-crypt axis, G753
Neurotensin, cerebral glucose utilization and, cold water restraint, G591
Neurotoxin, chemical degeneration, intestinal nerves, G848
- Neurotransmitters**, identification, post-junctional receptors, G103
Newborn
 oxygen availability effects, venous pressure elevation, intestine (swine), G873
 smooth muscle contractility, gastric antrum, G571
Nitric oxide, administration, splanchnic artery occlusion shock, G275
Noncholinergic inhibitory nerves, stimulation, esophageal muscle strips, G344
Norepinephrine, systemic vascular sensitivity to, portal hypertension and, G191
Nucleus tractus solitarius, proximal stomach, brain stem response to vagal interactions, G320
Nutrients, ontogenetic development of transporters, intestine (bullfrog), G760, G770
- O**
- Omeprazole**
 gene expression and, antral, inhibition of gastric secretion effects, G788
 hydrogen-potassium-ATPase activity, glucose oxidation and, gastric glands, G719
Opioids, amyogenesis and dysmyogenesis induced by, small intestine, G282
Ornithine decarboxylase
 activity, LoVo cells, G934
 gastric and duodenal mucosal, after corticosterone, G942
 intestinal, putrescine regulation, G308
 regulation, multiple pathways for, intestinal epithelial cells, G454
 repair, gastric mucosal stress ulcers, G78
Ouabain, potassium-ATPase sensitive to, epithelial cells, distal colon (guinea pig), G506
Oxidants, ischemia/reperfusion-induced granulocyte infiltration and, G185
Oxidation
 C-24, intestinal catabolism, G557
 triolein absorption and, diet effects, weanlings, G38
Oxygen
 availability, venous pressure elevation and, intestine (swine), G873
 ethanol and lactate metabolism, liver, ethanol effects, G411
 hydrogen-potassium-ATPase activity and, gastric glands, G719
 reactive, glutathione disulfide as index of, liver, G499
 supply-demand, hepatic, hypothermia and (pig), G910
 uptake, food-induced jejunal hyperemia and, G370
Oxygen metabolites, reactive, ischemia/reperfusion-induced granulocyte infiltration and, G185
Oxygen radicals
 ethanol-induced damage and, gastric mucosal cells, G603
 free, ischemic injury and, liver, G564
- P**
- PAF**: *see* Platelet-activating factor
Pancreas
 enzyme secretion, carbachol effects (guinea pig), G107

Pancreas (*continued*)

- exocrine secretion, endogenous insulin effects, G268
- secretion
 - after endogenous stimulation, G951
 - CCK-58 in, G253
 - intestinal motility and, G196
 - meal-induced, L364,718 effects, G179
 - regulation by hormones, food, and neural pathways, G512
- Pancreatic acinar cells, AR42J, characterization of bombesin receptors, G803
- Pancreatic acini
 - enzyme secretion, carbachol effects (guinea pig), G107
 - VIP and secretin, CCK downregulation of receptors for, G395
- Pancreatic duct, epithelial growth, regulation of, G833
- Parietal cells, signal transduction in, epidermal growth factor effects, G476
- Pentagastrin, gastric secretion and, antral vagotomy effects, G919
- Pepsin
 - exocrine secretion and processing, gastric lumen, G419
 - secretion, antral vagotomy effects, G919
- Peptic cells, calcium ion influx defect in, decreased secretion due to (frog), G542
- Peptides: *see also* Polypeptides
 - gastrin-releasing, regulation by food, hormones, and neural pathways, G512
 - gastrointestinal, sodium-hydrogen exchanger in AR42J cells and, G958
 - pro-somatostatin-derived, release, calcitonin gene-related peptides and, G316
 - vasoactive intestinal
 - CCK downregulation of receptors for, pancreatic acini, G395
 - identification of neurotransmitters, G103
 - pancreatic duct epithelial growth and, G833
 - receptors, distribution, intestinal villus-crypt axis, G753
- Peptide YY, neuropeptide Y receptor and, distribution, intestinal villus-crypt axis, G753
- Peristalsis
 - esophageal contractions, modulation by bolus volume and outflow obstruction, G208
 - esophageal (opossum), G164
- Permeability
 - fluid, fecal dehydration, G391
 - microvascular, PAF and, adherent leukocytes, G158
- Pertussis toxin, EGF effects, signal transduction, parietal cells, G476
- pH
 - base secretion and, distal colon, G825
 - cell volume regulation, osmotic stress effects on hepatocytes, G290
 - intracellular, osmotic stress effects on hepatocytes, G299
 - regulation, gastrointestinal peptides, AR42J cells, G958
- Pharynx, swallow coordination and, manometry, G173
- Phentolamine, adrenergic, colonic distension and, G585

- Phorbol esters
 - decreased secretion, calcium ion influx defect in peptic cells (frog), G542
 - galanin inhibition and, gastric release, gastric G-cells, G596
 - secretion, pancreas, carbachol effects (guinea pig), G107
- Platelet-activating factor
 - gastric microcirculatory response to, morphine and capsaicin pretreatment effects, G352
 - inflammation and, gastric ulcer, G1
 - microvascular dysfunction induced by, adherent leukocytes and, G158
- Polyamines
 - gastric and duodenal mucosal, after corticosterone, G942
 - intestinal, putrescine regulation, G308
 - luminal, gastrointestinal, G576
 - regulation, multiple pathways for, intestinal epithelial cells, G454
 - repair, gastric mucosal stress ulcers, G78
- Polypeptides: *see also* Peptides
 - vasoactive, cholinergic myenteric neurons, antrum, G122
 - vasoactive intestinal, chloride secretion and, distal colon, G223
- Postganglionic nerve, stimulation, esophageal muscle strips, G344
- Postprandial state, frequency and velocity, intestinal contractions, G738
- Potassium
 - balance, flow in liver and, G45
 - conductance, basolateral, histamine effects, stomach (frog), G631
 - secretion, steroid regulation, proximal colon, G492
- Potassium-ATPase, ouabain-sensitive, epithelial cells, distal colon (guinea pig), G506
- Potassium channels
 - cell volume regulation, osmotic stress effects on hepatocytes, G290
 - gastric, acetylcholine and substance P effects (toad), G12
- Potassium current, cholinergic regulation of, esophageal smooth muscle cells, G794
- Potentials
 - intracellular, potassium balance effects, liver, G45
 - membrane, glutathione conjugate secretion, hepatocytes, G699
- Pressure: *see also* Blood pressure
 - duodenal, sphincter of Oddi (opossum), G138
 - ileal, colonic distension and, G585
 - lower esophageal sphincter, intra-abdominal pressure increase effects, G624
 - perfusion, gastric, histamine effects, G440
 - pyloric, waves, antral wall motion detector, G616
 - venous, elevation, oxygen availability and, intestine (swine), G873
- Proline, transport, ontogenetic development, intestine (bullfrog), G760, G770
- Propargylglycine, glutathione efflux and, hepatocytes, G967
- Prostaglandin E₂, cholinergic myenteric neurons, antrum, G122
- Prostaglandin F_{2α}, indomethacin and, small and large intestinal motility, G231

- Prostaglandins
 - histamine effects, colon, G432
 - inflammation and, gastric ulcer, G1
- Protein
 - bile acid transport, canalicular membrane, liver, G728
 - biliary, circadian rhythms of, G653
 - content, comparative analysis, mesenteric, G714
- Pro-xenopsin, exocrine secretion and processing, gastric lumen, G419
- Putrescine
 - gastrointestinal, cellular accumulation and enterohepatic circulation, G576
 - regulation, intestinal ornithine decarboxylase, G308

R

- Receptors
 - bombesin, molecular characterization, pancreatic acinar AR42J cells, G803
 - CCK, L364,718 antagonism of, pancreatic secretion, G179
 - CCK-B, A71378 and, G648
 - downregulation, pancreatic, carbachol effects (guinea pig), G107
 - H₂, cyclical chloride secretion and, distal colon (guinea pig), G887
 - pancreatic, CCK, G86
 - postjunctional, identification of neurotransmitters, G103
 - transferrin, iron uptake and, intestinal brush-border membrane vesicles, G535
- Rectum
 - epithelial cells, glycylsarcosine transport from (chicken), G660
 - migrating motor complex, synchrony with intestinal, G171
- Reflexes
 - gastric relaxation, isobaric intestinal distension, G202
 - peristaltic, esophageal (opossum), G164
 - rectoanal, neuropeptide Y role in (opossum), G59
 - spinal, tachykinin-mediated, G585
- Resistance
 - hydraulic, fecal dehydration, G391
 - systemic vascular, portal hypertension, G191
 - vascular, gastric, histamine effects, G440
- Rhythm, circadian, biliary protein and lipid excretion, G653
- Ribonucleic acid
 - corticosterone effects and, ornithine decarboxylase, gastric and duodenal mucosal, G942
 - messenger
 - development and tissue distribution of sucrase-isomaltase in, G52
 - somatostatin production, intestinal cells, G974
 - repair, gastric mucosal stress ulcers, G78
- Rubidium-86, bumetanide-sensitive influx, regulatory volume increase and, jejunum (guinea pig), G665

S

- Salivary gland, secretion, ACh stimulation effects, G878
- Secretin
 - CCK downregulation of receptors for, pancreatic acini, G395
 - endogenous insulin effects, G268

Sensory neurons: *see* Neurons

Shock

potassium balance effects, flow in liver, G45

splanchnic artery occlusion, nitric oxide and, G275

Slow-wave propagation, pathways, proximal colon, G894

Sodium

requirements, base secretion in distal colon, G825

substitution, LoVo cells, G934

Sodium chloride

electroneutral absorption, distal colon, G261

absorption, electroneutral, steroid regulation, proximal colon, G492

Sodium-hydrogen exchange

AR42J cells, gastrointestinal peptides, G958

cell volume regulation, osmotic stress effects on hepatocytes, G290, G299

ornithine decarboxylase activity, LoVo cells, G934

steroid regulation, proximal colon, G492

Sodium nitrite, acidified, splanchnic artery occlusion shock, G275

Sodium-potassium-chloride cotransport, bumetanide-sensitive, regulatory volume increase and, jejunum (guinea pig), G665

Solid residue, transit, colon, G856

Somatostatin

decreased secretion, calcium ion influx defect in peptic cells (frog), G542

degradation by milk, intestinal, G426

galanin release and, gastric G-cells, G596

gene expression, antral, inhibition of gastric secretion effects, G788

mRNA, duodenal CCK and, G358

secretion, regulation by hormones, food, and neural pathways, G512

Somatostatin-14, synthesis and secretion, intestinal cells, fetus, G974

Somatostatin-28, synthesis and secretion, intestinal cells, fetus, G974

Sphincter of Oddi, propulsive behavior (opossum), G138

Stenosis, portal vein, sensitivity to norepinephrine, G191

Steroids, receptor-specific agonists, ion transport and, proximal colon, G492

Stomach: *see also* entries under Gastric enkephalin metabolism, G143

extrinsic neural continuity to, jejunal regulation of gastric motility and, G32

mucosal stress ulcers, ornithine decarboxylase repair of, G78

oxyntic and surface epithelial cells, basolateral potassium conductance, histamine effects (frog), G631

proximal, brain stem response to vagal interactions, G320

Stress

cold-restraint, fecal pellet output and colonic transit with, G329

osmotic, cell volume regulation and, hepatocytes, G290, G299

Submucosal nerves, tetrodotoxin effects, chloride secretion, distal colon, G223

Substance P

electrical activity and, gastric cells (toad), G12

methylester, cholinergic myenteric neurons, antrum, G122

tachyphylaxis, colonic distension and, G585

Substrates, regulation dependent on, intestinal transporters (bullfrog), G770

Sucrase-isomaltase, mRNA, development and distribution in tissues, G52

Sucrose, absorption, intestinal, G216

Superoxide anion, ethanol-induced damage and, gastric mucosal cells, G603

Swallowing

coordination, manometry, G173

oral and pharyngeal phases, bolus variable effects, G675

Sympathetic nerves, internal anal sphincter, neuropeptide Y role in (opossum), G59

T

Taurocholate, bile acid transport protein isolation, canalicular, G728

12-*O*-Tetradecanoylphorbol 13-acetate, regulation, pancreatic duct epithelial growth, G833

Tetrodotoxin, chloride secretion and, distal colon, G223

Thromboxane, inflammation and, gastric ulcer, G1

Thyrotropin-releasing hormone, gastric motility, vagally mediated stimulation of, G637

Transferrin

content, comparative analysis, mesenteric, G714

iron uptake from, intestinal brush-border membrane vesicles, G535

Transmural field, stimulation, esophageal muscle strips, G344

Triglycerides, absorption, diet effects, weanlings, G38

Triolein, absorption, diet effects, weanlings, G38

U

Ulcer

gastric

cerebral glucose use, neurotensin effects, G591

lipid mediators of inflammation, G1

ornithine decarboxylase in repair of, G78

stress, intrahypothalamic corticotropin-releasing factor effects, G152

V

Vagotomy

antral, gastrin and gastric secretion with, G919

extrinsic neural continuity

jejunal regulation of gastric motility and, Diet: *see* Feeding

jejunal regulation of gastric motility and, Sympathectomy

Vagus nerve

dorsal motor nucleus of, stimulation of gastric motility, G637

gastric interactions, brain stem neurons and, G320

Vascular regulation, metabolic, oxygen availability and, intestine (swine), G873

Vasodilation, gastric, histamine effects, G440

Vasopressin, calcium ion release, liver, G73

Ventromedial nucleus, gastric bicarbonate and stress ulcers, intrahypothalamic corticotropin-releasing factor effects, G152

Veratridine, cholinergic response, regional colonic differences

Videomicroscope, unstirred water layers, villous motility and, intestine, G238

Villous cells, ornithine decarboxylase, putrescine regulation, intestine, G308

VIP: *see* Peptides, vasoactive intestinal; Polypeptides, vasoactive intestinal

Vitamin D, calcium uptake dependent on, duodenal (bird), G16

Vitamin D₃, 1,25-dihydroxy-, catabolism induced by, intestine, G557

Volume

bolus

oral and pharyngeal phases of swallowing and, G657

outflow obstruction and, esophageal contractions, G208

cell, regulation, osmotic stress effects, G299, G290

excluded, protein content, mesenteric, G714

regulatory, increase, jejunal villus (guinea pig), G665

W

Water

absorption

descending colon, G377

intestinal, G216

villous motility and, intestine, G238

cold, restraint, cerebral glucose utilization, neurotensin effects, G591

Weanlings, triolein absorption, diet effects, G38

X

Xanthine oxidase, circulating, ischemic injury and, G564

Xenopsin, exocrine secretion and processing, gastric lumen, G419

Z

Zinc, anion exchange and, apical membrane, gallbladder epithelium (mudpuppy), G745



Author Index to Volume 21

- Adachi, H., G395
 Akkermans, L. M. A., G616
 Amidon, G. L., G65
 Ananthanarayanan, M., G728
 Andersson, K.-E., G338, G344
 Andrews, G. K., G926
 Aoki, E., G395
 Aoki, N., G275
 Asher, V. A., G476
 Azpiroz, F., G202
- Barber, B. J., G714
 Barber, W. D., G320
 Barker, F., III, G461
 Barone, F. C., G329
 Bastié, M.-J., G958
 Beckman, J. S., G564
 Beckman, T. K., G564
 Bennett, M. J., G648
 Biagi, B., G223
 Biancani, P., G794
 Bianchi, B. R., G648
 Binder, H. J., G492
 Black, C., G774
 Blain, P. L., G129
 Bleakman, D., G377
 Bleiler, T. L., G216
 Blot-Chabaud, M., G863
 Boland, C. R., G774
 Bolufer, J., G660
 Bosch, J., G191
 Bowes, K. L., G484
 Boyer, J. L., G290, G299
 Bradley, E. L., Jr., G910
 Brannon, P. M., G38
 Brasitus, T. A., G261
 Brasseur, J. G., G675
 Bremner, A., G552
 Bridson, J., G904
 Brown, M. L., G856
 Browning, C., G610
 Brubaker, P. L., G974
 Bryan, R. M., G591
 Bühner, S., G738
 Bunnett, N. W., G143, G316
 Burakoff, R., G231
- Calabuig, R., G138
 Calonge, M. L., G660
 Camilleri, M., G856
 Cammarata, B. J., G320
 Carraway, R. E., G419
 Carter, K. J., G815
 Casamitjana, R., G191
 Cash, T. G., G564
 Castell, D. O., G173
 Castell, J. A., G173
 Chang, T.-M., G268
 Cheung, L. Y., G440
 Chey, W. Y., G268
 Chou, C. C., G370
 Classen, M., G596
 Condon, R. E., G247, G848
 Conklin, J. L., G894
 Cook, I. J., G675
 Cooke, H. J., G223, G432, G887
 Corasanti, J. G., G290, G299
 Corbic, M., G863
- Cowles, V., G247
 Cragoe, E. J., Jr., G934
 Curci, S., G631
- Dalton, C. B., G173
 Daniel, E. E., G24
 Danks, D. M., G988
 Dantas, R. O., G675
 Davis, T. P., G426
 Dawson, K., G745
 Debas, H. T., G143, G316
 Debellis, L., G631
 Deegan, J. F., G329
 Dent, J., G616, G624
 DeRiso, J., G585
 Deshmukh, G. D., G774
 Diamond, J. M., G760, G770
 Dickinson, C. J., G810
 Dickinson, K. E. J., G542
 Dietert, R. R., G926
 Dobbins, W. O., III, G774
 Dockray, G. J., G552, G904
 Dodds, W. J., G675
 Dosako, S., G535
 Doty, J., G65
 Dumas, B. T., G848
 Draviam, E., G803
 Dressman, J. B., G65
 Drucker, D. J., G974
 Du, C., G894
 Dudeja, P. K., G261
 Dumont, M., G863
- Eberlein, G. A., G253, G951
 Ehrlein, H.-J., G738
 Elliot, M., G552
 Ensink, J. W., G316
 Erlinger, S., G863
 Esplugues, J. V., G352
 Ewart, W. R., G841
 Eysselein, V. E., G253, G951
- Feldman, G. M., G825
 Fernandez-Checa, J. C., G967
 Ferris, C. F., G419
 Fertel, R., G432
 Fisher, M., G624
 Fleet, J. C., G926
 Fleschner, C. R., G73
 Flores, C. A., G38
 Folke, M., G45
 Fondacaro, J. D., G329
 Fone, D. R., G616
 Fong, J., G919
 Forman, A., G338, G344
 Forster, E. R., G552
 Forth, W., G519
 Foster, E. S., G261
 Fowler, P. J., G329
 Frantzides, C. T., G247, G848
 Freeman, B. A., G564
 Frömter, E., G631
 Fryklund, J., G719
 Funch-Jensen, P., G338, G344
 Fuwa, T., G682
- Garancis, J. C., G848
 Gardner, J. D., G86, G107
- Gedda, K., G719
 Gelman, S., G910
 Gill, R. C., G610
 Gillis, R. A., G637
 Ginty, D. D., G454
 Giraud, A., G788
 Gisolfi, C. V., G216
 Gleeson, D., G290, G299
 Goebell, H., G196, G253, G951
 Goldenring, J. R., G476
 Golemboski, K. A., G926
 Goresky, C. A., G461
 Grandt, D., G253, G951
 Granger, D. N., G158, G185, G238
 Green, T., G552
 Greenberg, G. R., G974
 Greenway, C. V., G411
 Grider, J. R., G103
 Grisham, M. B., G185
 Groen, A. K., G699
 Gross, S. M., G988
 Groszmann, R. J., G365
 Gunion, M. W., G152
 Guo, Y.-S., G803
- Håkanson, R., G596
 Hakim, N. S., G32
 Halliday, J. W., G707
 Hamilton, J. R., G665
 Hanano, M., G682
 Harrington, B., G690
 Hasler, W. L., G404
 Helton, W. S., G316
 Henning, S. J., G52
 Hesse, W. H., G951
 Higham, S., G73
 Hightower, J., G982
 Hillemeier, C., G794
 Hiraishi, H., G603
 Hirschowitz, B. I., G542, G919
 Holladay, M. W., G648
 Holle, G. E., G519
 Honda, T., G395
 Hootman, S. R., G833
 Horiguchi, Y., G542
 Hornby, P. J., G637
 Horowitz, M., G616
 Huang, S. C., G86
 Hunt, D. M., G447
- Iga, T., G682
 Ilundain, A., G660
 Imai, Y., G878
 Ivey, K. J., G603
 Iwami, K., G308
- Jaeschke, H., G499
 Jain, R., G308
 Jansen, P. L. M., G699
 Jensen, R. T., G86, G107
 Johnson, L. R., G78, G308, G934, G942
 Johnson, G., III, G275
 Jones, G., G557
 Jones, M. V., G841
- Kahrilas, P. J., G675
- Kalbfleisch, J. H., G690
 Kanayama, S., G358
 Kaplowitz, N., G967
 Katsushima, S., G395
 Kauffman, G. L., Jr., G152, G591
 Kaufman, S. S., G129
 Kawakami, H., G535
 Keenan, C. M., G527
 Kellow, J. E., G610
 Kern, M. K., G675
 King, J. C., G591
 Kingma, Y. J., G484
 Kitchens, D. L., G745
 Koelbel, C. B. M., G122
 Koethe, J. D., G825
 Koldovsky, O., G38, G426
 Konishi, J., G395
 Kraus, E. R., G774
 Kraus-Friedmann, N., G73
 Kreutzmann, D., G447
 Kubes, P., G158
 Kuhn, D. H., G637
 Kumar, D., G171
 Kurosawa, S., G404
 Kurosky, A., G803
 Kusui, T., G395
 Kvietys, P. R., G238
- Laburthe, M., G753
 Lang, I. M., G675
 LaRusso, N. F., G653
 Latt, W. W., G411
 Layer, P., G196
 LeDuc, L., G122
 Lee, H.-H., G815
 Lee, K. Y., G268
 Leeper, L. L., G52
 Lefer, A. M., G275
 Lencer, W. I., G96
 Lewis, J. J., G476
 Lewis, L. D., G512
 Liddle, R. A., G358
 Liefing, W. G. M., G699
 Lin, C. W., G648
 Lönnerdal, B., G535
 Lonovics, J., G904
- MacLeod, R. J., G665
 Maddatu, T., G967
 Mailman, D., G238
 Malagelada, J.-R., G202
 Mantey, S., G86
 Marino, L., G810
 Marlowe, M., G454
 Massey, B. T., G675
 Matsumoto, H., G542
 Mayer, E. A., G122
 McArdle, H. J., G988
 McCallum, R. W., G208, G624
 McCormack, S., G308
 McCormack, S. A., G934
 McCormick, C. C., G926
 McKie, A. T., G391
 Meyer, H. E., G253
 Meyer, J. H., G65
 Miller, C. E., G873
 Miller, T. R., G648
 Mittal, R. K., G208, G624

- Miyamoto, M., G878
 Modlin, I. M., G476
 Mogard, M., G788
 Moody, F. G., G138
 Morrill, M., G38
 Murakami, M., G107, G878
 Muraki, K., G419
 Mutoh, H., G603

 Nadzan, A. M., G648
 Naftalin, R. J., G377, G391
 Nagano, K., G910
 Nakahari, T., G878
 Nakano, A., G653
 Nastos, E., G231
 Nemeth, J., G904
 Neutra, M. R., G96
 Niebel, W., G253
 Noguchi, M., G395
 Norman, W. P., G637
 Nowak, T. V., G690
 Nowicki, P. T., G873
 Nurko, S., G59

 O'Loughlin, E. V., G447
 Onishi, S., G395
 Ookhtens, M., G967
 Oppliger, R. A., G216
 Ormsbee, H. S., III, G329
 O'Rourke, M. F., G179
 Osborne, D. L., G576
 Ota, S., G603
 Ottenhoff, R., G699
 Otterson, M. F., G282
 Oude Elferink, R. P. J., G699
 Ouyang, A., G585
 Owyang, C., G404

 Pang, K. S., G461
 Park, J. H. Y., G129
 Parks, D., G910
 Parks, D. A., G564
 Pekala, P. H., G454
 Peschel, S., G196
 Phillips, S. F., G856
 Pique, J. M., G352
 Pizcueta, M. P., G191
 Powell, L. W., G707
 Powrie, W., G391

 Price, W. J., G329
 Primi, M.-P., G841
 Prinz, C., G596
 Proano, M., G856

 Ramm, G. A., G707
 Randlett, D. L., G714
 Rao, R. K., G426
 Rattan, S., G59
 Raundahl, U., G344
 Reddy, S. N., G24
 Reeve, J. R., Jr., G253, G951
 Reidelberger, R. D., G179
 Reinhart, F. D., G96
 Ren, J., G164, G208
 Ren, X. S., G268
 Reuss, L., G745
 Rochester, D. F., G624
 Rodés, J., G191
 Rosenquist, G. L., G253
 Rossiter, C. D., G637
 Rothstein, R. D., G585
 Rouyer-Fessard, C., G753
 Ryan, J. P., G571

 Sabba, C., G365
 Sabourin, P. J., G484
 Sachs, G., G719
 Sanders, K. M., G12
 Sarin, S. K., G365
 Sarna, S. K., G282, G994
 Sarr, M. G., G32
 Sasaki, T., G16
 Sato, H., G682
 Sato, S., G395
 Sawada, Y., G682
 Sawmiller, D. R., G370
 Schaeffer, M., G253, G951
 Schedl, H. P., G216
 Scheiman, J. M., G774
 Schemann, M., G738
 Schepp, W., G596
 Schlesinger, T., G196
 Schmid, H.-R., G738
 Schoemaker, B., G699
 Schubert, M. L., G982
 Schulte, W. J., G247
 Schultz, T. J., G714
 Schulze-Delrieu, K., G164

 Schusdziarra, V., G596
 Schwab, A. J., G461
 Scott, D., G719
 Seidel, E. R., G454, G576
 Sestoft, L., G45
 Shaffer, H. A., Jr., G208
 Sharp, C. M., G107
 Shinki, T., G16
 Shonnard, P. Y., G12
 Siegle, M.-L., G738
 Silen, W., G815
 Sims, S. M., G794
 Singer, J. J., G794
 Singh, P., G803
 Sippel, C. J., G728
 Siros, P. J., G65
 Sluss, J., G208, G624
 Snape, W. J., Jr., G122
 Sohma, Y., G878
 Solomon, T. E., G179
 Soper, N. J., G32
 Spencer, M. P., G32
 Stephenson, R. L., G825
 Su, H.-C., G432
 Suchy, F. J., G728
 Suda, T., G16
 Sugimoto, T., G603
 Sugiyama, Y., G682
 Sumii, K., G788
 Summers, R. W., G216
 Suzuki, M., G158
 Suzuki, T., G506
 Suzuki, Y., G506

 Taché, Y., G152
 Tague, L. L., G934
 Takito, J., G16
 Tatge, C., G596
 Tenenhouse, H. S., G557
 Terano, A., G603
 Thomforde, G. M., G856
 Thompson, P. D., G171
 Thuneberg, L., G992
 Tietz, P. S., G653
 Toloza, E. M., G760, G770
 Tomon, M., G557
 Tøttrup, A., G338, G344
 Tuma, D. J., G129
 Turnamian, S. G., G492

 Uemura, N., G542
 Uldbjerg, N., G338
 Ulrich-Baker, M. G., G138

 van der Schee, E. J., G616
 VanDeventer, G., G122
 Varro, A., G904
 Verme, T. B., G833
 Vinayek, R., G107
 Vivaudou, M. B., G794
 Voisin, T., G753

 Wallace, J. L., G1, G527
 Wallmark, B., G719
 Walsh, J. H., G143, G788
 Walsh, J. V., Jr., G794
 Wang, J.-Y., G78, G308, G942
 Wang, Y. Z., G223, G432, G887
 Wank, S. A., G86
 Watanabe, T., G506
 Wedd, A. G., G988
 Weems, W. A., G138
 Weisbruch, J. P., G690
 Wells, M. A., G38
 Wheat, J. K., G564
 White, R. L., G637
 Whittle, B. J. R., G352
 Wicina, G. M., G440
 Williams, J. A., G512, G958
 Williams, R., G951
 Wingate, D. L., G171, G610
 Witte, D. G., G648
 Wolfram, C. A. W., G648
 Womack, W. A., G238
 Won, S., G231
 Wood, J. G., G440
 Wu, S. V., G788

 Xing, L., G591

 Yamada, T., G810
 Yanaka, A., G815
 Yokoyama, Y., G564
 Yoshida, H., G878
 Yu, D.-H., G86
 Yuan, C.-S., G320

 Zhou, L., G268
 Zimmerman, B. J., G185
 Zitterman, J., G571

